

## **Enhancement of the Earth Science and Remote Sensing Group's Website and Related Projects**

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### **Abstract**

The major problem addressed throughout the term was the need to update the group's current website, as it was outdated and required streamlining and modernization. The old Gateway to Astronaut Photography of the Earth website had multiple components, many of which involved searches through expansive databases. The amount of work required to update the website was large and due to a desired release date, assistance was needed to help build new pages and to transfer old information. Additionally, one of the tools listed on the website called Image Detective had been underutilized in the past. It was important to address why the public was not using the tool and how it could potentially become more of a resource for the team.

In order to help with updating the website, it was necessary to first learn HTML. After assisting with small edits, I began creating new pages. I utilized the "view page source" and "developer" tools in the internet browser to observe how other websites created their features and to test changes without editing the code. I then edited the code to create an interactive feature on the new page. For the Image Detective Page I began an evaluation of the current page. I also asked my fellow interns and friends at my University to offer their input. I took all of the opinions into account and wrote up a document regarding my recommendations. The recommendations will be considered as I help to improve the Image Detective page for the updated website.

In addition to the website, other projects included the need for additional, and updated image collections, along with various project requests. The image collections have been used by educators in the classroom and the impact crater collection was highly requested. The glaciers collection focused mostly on South American glaciers and needed to include more of the earth's many glaciers. The collections had not been updated or created due to the fact that related imagery had not been catalogued. The process of cataloging involves identifying the center point location of the image and feature identification.

Other project needs included collecting night images of India in for publishing. Again, many of the images were not catalogued and the database was lacking in night time imagery for that region. The last project was to calculate the size of mega fans in South Africa. Calculating the fan sizes involved several steps. To expedite the study, calculations needed to be made after the base maps had been created.

Using data files that included an outline of the mega fans on a topographic map, I opened the file in Photoshop, determined the number of pixels within the outlined area, created a one degree squared box, determined the pixels within the box, converted the pixels within the box to kilometers, and then calculated the fan size using this information. Overall, the internship has been a learning experience for me. I have learned how to use new programs and I developed new

skills. These skills can help me as I enter into the next phase of my career. Learning Photoshop and HTML in addition to coding in Dreamweaver are highly sought after skills that are used in a variety of fields. Additionally, the exposure to different aspects of the team and working with different people helped me to gain a broader set of skills and allowed me to work with people with different experiences. The various projects I have worked on this summer have directly benefitted the team whether it was completing projects they did not have the time to do, or by helping the team reach deadlines sooner. The new website will be the best place to see all of my work as it will include the newly designed pages and will feature my updates to collections